MIL-W-22759/9B
19 July 1974
SUPERSEDING
MIL-W-22759/9A
29 June 1973
See also "Supersession
Data" on Page 3

MILITARY SPECIFICATION SHEET

WIRE, ELECTRIC, FLUOROPOLYMER-INSULATED, EXTRUDED TFE, SILVER-COATED COPPER CONDUCTOR, 1000-VOLT

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the wire described herein shall consist of this document and the issue in effect of Specification MIL-W-22759.

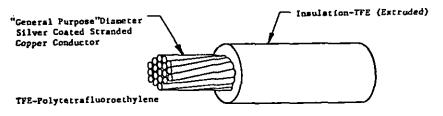


TABLE I. CONSTRUCTION DETAILS

	Wire size		Diameter of stranded conductor (inches)		Finished wire			
Part No. 1/		Stranding (Number of strands X AWG gage of strands)			Resistance at 20°C (68°F) (ohms/1000 ft)	Diameter (inches)	Weight (lbs/1000 ft) (max)	
		gage of Brianna)	(a1ģ)	(max)	(max)		,	
M22759/9-28-*	28	7 X 36	.014	.015	63.8	.043 +.002	1.90	
H22759/9-26-*	26	19 X 38	.018	.020	38.4	.048 ±.002	2.57	
H22759/9-24-*	24	19 X 36	.023	.Q25	24.3	.053 ±.002	3.33	
H22759/9-22-*	22	19 X 34	.029	:032	15.1	.060 ±.002	4.60	
M22759/9-20-*	20	19 X 32	.037	.040	9.19	.068 <u>+</u> .002	6.40	
M22759/9-18-*	18	19 X 30	046	.050	5,79	.078 ±.002	9.10	
M22759/9-16-*	16	19 X 29	.052	.057	4,52	.085 ±.002	11.0	
M22759/9-14-*	14	19 X 27	065	.072	2.88	.100 ±.003	16.4	
M22759/9-12-*	12	(B) 19 X 25	B)082	(в).090	(8) 1.81	120 ±.004	(B) 25.3	
M22759/9-10-*	10	→ 37 X 26	. 106	Ŭ.112	1,19	$.141 \pm .004$	38.2	
H22759/9-8-#	8	133 X 29	.158	.169	.658	.207 <u>+</u> .005	68.8	

^{1/} PART NO.: The asterisks in the part number column, Tables I through III, shall be replaced by color code designators in accordance with MIL-STD-681. Examples: Size 20, white - M22759/9-20-9; white with orange stripe - M22759/9-20-93.

(a) denotes changes

FSC 6145

Page 1 of 3 pages

TABLE II. PERFORMANCE DETAILS

	Abr	Bend testing						
	Resistance (inches of tape)	(Procedure 1)		Tension	Mandrel diameter (inches) (±3%)		Test load (1bs) (+32)	
Part No.	(min) (initial condition)	support bracket	Weight (lbs)	load (lbs)	Life cycle (oven & bend tests) 1/	Cold bend test	Life cycle (oven 6 bend tests) 1/	Cold bend test
H22759/9-28-*	24		.50	1.0	.125	.250		L
M22759/9-26-*	24		.50	1.0	.125	.250		50
H22759/9-24-*	30	' A [.50	1.0	.125	.250		50
H22759/9-22-*] 30]		. 50	1.0	.250	.375		75
M22759/9-20-*	30	Α	. 50	1.0	.250	.375		75
H22759/9-18-*	36	В	.75	1.0	. 250	.375	1.00	
M22759/9-16-*	36	в !	.75	2:.0	. 375	.500	1.00	
H22759/9-14-*	36	В.	1.25	2.0	.500	.750	2.00	
H22759/9-12-*	36	в	1.25	2.0	.500	.750	2.0	
H22759/9-10-*	48	8	1.25	2.0	.750	1.00	3.0	
M22759/9-8-*	48	c	2.00	2.0	.750	1.00	3.00	

^{1/} Also for bend tests after immersion.

ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 200°C (392°F) max conductor temperature

VOLTAGE RATING: 1000 volts (rms) at sea level SPARK TEST OF PRIMARY INSULATION: Not required

SPARK TEST OF PRIMARY INSULATION: Not required IMPULSE DIELECTRIC TEST: 9.5 kilovolts (peak), 1002 test INSULATION RESISTANCE: 50,000 megohms for 1000 ft (min) WRAP TEST: "Wrap back" test required, no cracking Oven temperature, 313 +2°C (595.4 +3.6°F) BLOCKING: 260 +2°C (500 +3.6°F)
SHRINKAGE: 0.03 inch max at 290 +2°C (554 +3.6°F)

WICKING: No requirement LOW TEMPERATURE (COLD BEND):

Bend temperature: -65 +2°C (-85 +3.6°F)

Dielectric test, 3000 volts (rms), 60Hz

THERMAL SHOCK: Oven temperature 200 +2°C (392 +3.6°F)

Max change in measurement Sizes 28 through 12: 0.060 inch

Sizes 10 through 8: 0.100 inch

FLAMMABILITY: Post-flame dielectric test not required LIFE CYCLE: Oven temperature 275 ±2°C (527 ±3.6°F)

Dielectric test, 3000 volts (rms), 60Hz DIELECTRIC TEST AFTER IMMERSION: 3000 volts (rms), 60Hz ABRASION RESISTANCE AFTER IMMERSION: No requirement

BUMIDITY RESISTANCE: No requirement SURFACE RESISTANCE: 500 megohm-inches (min) initial and final readings

SMOKE: 290°C (554°F)

ACID RESISTANCE: Required

Dielectric test, 3000 volts (rms), 60Hz COLOR: In accordance with MIL-STD-104, Class 1; white preferred

COLOR STRIPING OR BANDING DURABILITY: 250 cycles (500 strokes) (min), 500 grams weight IDENTIFICATION DURABILITY: 125 cycles (250 strokes) (min), 500 grams weight WIRE LENGTH REQUIREMENTS: Schedule A

SUPERSESSION DATA: The wire of this specification sheet, by part number, replaces and supersedes the wire of MS18113(AS) (canceled) in accordance with Table III.

TABLE III. SUPERSESSION BY PART NUMBER

Part number	Part number			
(S18113(AS)	MIL-W-22759/9			
MS18113-28-*	M22759/9-28-*			
MS18113-26-*	M22759/9-26-*			
MS18113-24-*	M22759/9-24-*			
MS18113-22-*	M22759/9-22-*			
MS18113-20-*	M22759/9-20-*			
MS18113-18-*	M22759/9-18-*			
MS18113-16-*	M22759/9-16-*			
MS18113-14-*	M22759/9-14-*			
MS18113-12-*	M22759/9-12-*			
MS18113-12-"	M22759/9-10-*			
MS18113-10-~ MS18113-8-*	M22759/9-8-*			

Custodians:

Navy - AS

Army - EL

Air Force - 80

Review activities:

Navy - EC, OS

Army - ME, MI, MU

Air Force -

DSA - IS

NSA

Preparing activity:

Navy - AS

(Project No. 6145-0670-7)

User activities:

Navy - MC

Army - AT, AV

Air Force - 11

Review/user information is current as of the date of this document. For future coordination of changes to this document, draft circulation should be based on the information in the current Federal Supply Classification Listing of DOD Standardization Documents.

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